

REMARKS/ARGUMENTS

Favorable reconsideration of this Application, as presently amended and in light of the following discussion, is respectfully requested.

This Amendment is in response to the Office Action mailed on August 19, 2003.

Claims 1-4, 6-14, 19, and 20 are pending in the application and stand rejected. Applicants have herein amended Claims 1 and 2, and submitted new Claims 21-25.

Applicants thank the Examiner for the courtesy of an interview extended to Applicants' Representatives on December 18, 2003. During the interview arguments in support of the patentability of the pending and new claims were presented similar to the ones presented more extensively herein below, but no agreement was reached.

Claims 1-4, 6-9, 11, 13-14, and 19-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Russo (U.S. Application Publication No. US 2002-0167989 A1, hereinafter “Russo”) in view of Kamata et al. (U.S. Patent No. 5,431,697, hereinafter “Kamata”) and in view of Vagedes (U.S. Patent No. 5,839,581, hereinafter “Vagedes”).

Applicants respectfully submit that Russo, Kamata, and Vagedes, individually or in any combination thereof, do not support a *prima facie* case of obviousness of the invention recited in the presently amended independent Claim 1. This is so because of at least two reasons. First, even when combined, these prior art references do not teach or suggest all of the claim limitations recited therein. Second, there is no suggestion or motivation to combine the references.

According to a feature of the invention as set forth in the presently amended Claim 1, an article is recited comprising, among other limitations: a beverage container; and a cap, wherein a material comprising the cap comprises at least one thermochromic material in admixture with at least one thermoplastic polymer resin, said thermochromic material selected such that the cap has a visually altered appearance when the cap temperature changes

within a temperature range of -25 to 40 C, and wherein said cap further comprises at least one non-thermochromic printing ink layer on at least a portion of an outer surface thereof.

As discussed in Applicants specification, the present invention relates to a plastic cap adapted to fit a beverage container, wherein the plastic cap can change color in response to temperature (Specification, page 1, lines 7-8). In addition, as also explained in Applicants' Specification, the cap is suitable for use in both carbonated and non-carbonated beverage applications or for any container requiring a hermetic seal (Specification, page 3, lines 9-10).

Russo has been cited as disclosing a coffee cup with temperature indication comprising a beverage container, wherein a material comprising the cap comprises at least one thermochromic material. The outstanding Office Action acknowledges that Russo does not disclose (1) the lid being formed of a thermochromic material in admixture with at least one thermoplastic polymer resin, (2) the thermochromic material selected such that the cap has a visually altered appearance when the cap temperature changes within a temperature range of -25 to 85 °C, and (3) the non-thermochromic printing ink layer on at least a portion of an outer surface of the cap.

As disclosed, Russo's invention is concerned with the protection of a user against scalding during the consumption of hot beverages or meals. Specifically, Russo discloses that the motivation for its invention was the "notorious lawsuit brought several years ago against McDonalds by a woman scalded by hot coffee" (Russo, page 1, paragraph 5). Russo teaches and discloses that "it would be clearly advantageous to sellers and consumers of take-out coffee (or tea or soup, see, for example, page 1, paragraph 8) to know the temperature of the coffee in the cup" (*Id.*), i.e., "by viewing the thermochromic material, [a user would be able to tell whether or not] the coffee is either too cold, too hot, or just right" (*Id.*, page 1, paragraph 6). In addition, in paragraph 8 on page 1, it was noted that an "additional

advantage of the invention included reminding the user that the coffee is getting cold, as well as when it is too hot."

Applicants respectfully submit that Russo does not obviate the invention recited in Claim 1 because it does not obviate, among other limitations, the amended temperature range of -25 to 40 °C. Applicants' temperature range varies from subzero to room temperature in a hot day. Russo's temperature range is certainly above room temperature because it is concerned with the risk of scalding. A summary of the facts about the McDonalds' scalding case is included herein for additional information. As suggested, the temperatures of concern when dealing with coffee varies from about 57 up to 90 °C, i.e., from 135 to 190 °F. Such a range is outside the recited range in Claim 1. Thus, Russo cannot obviate the invention recited in the presently amended Claim 1.

Kamata was cited as disclosing a reversibly variable color patterning composition for synthetic resin articles, comprising an admixed polymer and a thermochromic material that change colors at ambient temperature. In fact, "the inventors found that particularly when a micro-encapsulated thermo- or photochromic material is employed, there are obtained articles responding to change in ambient temperature or ambient light with particular high sensitivity to undergo reversible changes in color" (Kamata, col. 1, lines 63-68, emphasis added). Thus, Kamata does not resolve the above-noted deficiency of Russo.

In fact, Applicants respectfully submit that there is no suggestion to combine Russo with Kamata except the use of impermissible hindsight. The outstanding Office Action points to the second exemplary embodiment of Kamata, wherein a thermochromic material is disclosed admixed with a polypropylene resin that changes color at 10 °C. Kamata discloses specifically five exemplary embodiments of his invention, which clearly show that the temperature range of interest is ambient temperatures ranging between 10 and 40 °C. For example, on the embodiment of Example 1, the change in color goes from black to white as

the ambient temperature changes from 25 to 40° C (Kamata, col. 9, lines 31-33). In Example 2, the embodiment is colorless at 25 °C and turns into blue when cooled to an ambient temperature of 10 °C (*Id.*, col. 10, lines 1-3). No specific temperature range was mentioned with Example 3, but in Example 4 the composition is blue at 25 °C and becomes colorless at 35 °C (*Id.*, col. 11, lines 37-39). Finally, in Example 5, it was disclosed and thought that the composition in that embodiment is green at room temperature, i.e., 25 °C, and becomes colorless when warmed to 35 °C (*Id.*, col. 12, lines 1-4). In Example 5, the sheet-like material presented a scales-like green-on-yellow pattern when the atmospheric temperature was 10 °C, but when the atmospheric temperature rose to 25 °C, the yellow background became colorless to leave only the green scales prominent. When the temperature rose further to 35 °C, this pattern also disappeared so that the whole sheet became colorless (*Id.*, col. 12, lines 25).

In addition, Applicants respectfully submit that the combination of Kamata and Russo will actually make the invention of Russo unsatisfactory for its intended use. This is so because the mixture of admixed material of Kamata will not change colors in the temperature range of interest in Russo since its change in color takes place at ambient temperatures.

Based on the foregoing reasons, Applicants respectfully submit that the combination of Kamata and Russo cannot obviate the invention recited in Claim 1.

Turning the attention now to Vagedes, it was cited as disclosing a spill-resistant drinking vessel with indicia or print letters (5) on the top surface of the lid. Vagedes does not remedy the above-summarized deficiencies of and lack of motivation to combine Russo and Kamata. Therefore, Applicants respectfully submit that Russo, Kamata, and Vagedes, individually or in any combination thereof, do not support a *prima facie* case of obviousness of presently amended Claim 1. In addition, Claims 2-4, 6-9, 11, 13-14, and 19-20 are allowable among other reasons, as depending directly from Claim 1, which is allowable. For

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the foregoing remarks, Applicants respectfully request that the Examiner withdraw the rejection of Claims 1-4, 6-9, 11, 13-14, and 19-20 under 35 U.S.C. §103(a).

Claims 10 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Russo, as applied above in view of Kamata and in view Vagedes, and in further view of Mueller (U.S. Patent No. 5,415,312, hereinafter “Mueller”). Claims 10 and 12 are dependent on Claim 1, thereby incorporating all of the limitations thereof. Russo was additionally acknowledged as not disclosing a lid comprising more than one piece or that the lid provides a hermetic seal. Mueller was disclosed as teaching a closure for a liquid container, comprising drinking hole 80 a stopper 100 for selectively closing off the drinking hole on a container lid.

Applicants respectfully submit that Russo, Kamata, Vagedes, and Mueller, individually or in any combination thereof, do not support a *prima facie* case of obviousness of the invention recited in the presently amended independent Claim 1. This is so because, even when combined, these prior art references do not teach or suggest all of the claim limitations recited therein. That is, Mueller does not remedy the previously discussed lack of teaching of the recited temperature range in Claim 1. Therefore, at least based on above-explained claim dependency, the rejection of Claims 10 and 12 under 35 U.S.C. § 103(a) based on the combination of Russo, Kamata, Vagedes, and Mueller should be withdrawn.

Applicants have herein submitted new Claims 21-25. Claim 21 recites subject matter similar to that found in Claim 1 before the present amendment, except for the recitation of a liner. None of the cited references anticipate or make obvious such a feature. Support for the subject matter of Claim 21 is found in the as-filed Specification, page 3, line 22.

New Claim 22 recites, among other limitations, that the cap further comprises at least one non-thermochromic printing ink layer on at least a portion of an outer surface thereof, wherein the non-thermochromic printing ink is visible at a first temperature of the cap and is

invisible at a second temperature of the cap. Claim 23-25 are dependent on Claim 22.

Support for the subject matter of Claims 22-25 is found on page 5 of Applicants' Specification, starting on line 25. Applicants respectfully submit that none of the cited references obviate or anticipate the inventions recited in the new Claims 22-25 because, besides the reasons already provided for the withdrawal of the rejection of Claim 1, which is equally applicable in support of the patentability of Claims 22-25, Russo, Kamata, Vagedes, and Mueller are silent with respect to a non-thermochromic printing ink layer visible at a first temperature of the cap and invisible at a second temperature.

During the discussion of new claims 19-25 in the personal interview, the Examiner mentioned three references that could potentially be used. Although a formal rejection has not been made, Applicants offer the following brief comments about the three references as an attempt to speed up the prosecution process of this application. In case a formal rejection is made based on these references, Applicants will prepare an extensive response documenting in detail arguments in support of the patentability of the pending claims in view of these references informally mentioned during the personal interview.

In Carballido (U.S. Patent No. 6,634,516) the non-thermochromic is always visible (Carballido, col. 4, lines 7-12); therefore, Carballido would not support anticipation and/or obviousness rejections of Claims 22-25. As far as Myers is concerned (U.S. Patent No. 6,513,379 B2), although the body of the infant drinking container is made of thermochromic material, the caps 30 and 40 are made of a conventional material (see, for example, col. 4, lines 33-54, discussing the lids for the infant container). Finally, as to Elele (U.S. Patent No. 5,720,555), this reference does not disclose a cap made of thermochromic material, but teaches a temperature indicating container 10 having a thermochromic layer 16 deposited on an outside surface 15, including a lid assembly 24 having a lid portion 26. The lid portion 26 has only portions 27 made of a thermochromic material. Applicants respectfully submit that

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Carballido, Myers, and Elele would not support an anticipation rejection, individually, or an obviousness rejection, individually and/or in any combination thereof, of any of the claims pending in this application.

Based at least on the foregoing reasons, Applicants believe the present application is in condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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ATTACHMENT

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The Actual Facts About The McDonalds' Coffee Case

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There is a lot of hype about the McDonalds' scalding coffee case. No
one is in favor of frivolous cases of outlandish results; however, it
is
important to understand some points that were not reported in most of
the stories about the case. McDonalds coffee was not only hot, it was
scalding -- capable of almost instantaneous destruction of skin, flesh
and muscle. Here's the whole story.

Stella Liebeck of Albuquerque, New Mexico, was in the passenger seat of
her grandson's car when she was severely burned by McDonalds' coffee in
February 1992. Liebeck, 79 at the time, ordered coffee that was served
in a styrofoam cup at the drivethrough window of a local McDonalds.

After receiving the order, the grandson pulled his car forward and
stopped momentarily so that Liebeck could add cream and sugar to her
coffee. (Critics of civil justice, who have pounced on this case, often
charge that Liebeck was driving the car or that the vehicle was in
motion when she spilled the coffee; neither is true.) Liebeck placed
the cup between her knees and attempted to remove the plastic lid from
the cup. As she removed the lid, the entire contents of the cup spilled
into her lap.

The sweatpants Liebeck was wearing absorbed the coffee and held it next
to her skin. A vascular surgeon determined that Liebeck suffered full
thickness burns (or third-degree burns) over 6 percent of her body,
including her inner thighs, perineum, buttocks, and genital and groin
areas. She was hospitalized for eight days, during which time she
underwent skin grafting. Liebeck, who also underwent debridement
treatments, sought to settle her claim for \$20,000, but McDonalds
refused.

During discovery, McDonalds produced documents showing more than 700
claims by people burned by its coffee between 1982 and 1992. Some
claims
involved third-degree burns substantially similar to Liebeck's. This
history documented McDonalds' knowledge about the extent and nature of
this hazard.

McDonalds also said during discovery that, based on a consultants

advice, it held its coffee at between 180 and 190 degrees fahrenheit to maintain optimum taste. He admitted that he had not evaluated the safety ramifications at this temperature. Other establishments sell coffee at substantially lower temperatures, and coffee served at home is generally 135 to 140 degrees.

Further, McDonalds' quality assurance manager testified that the company actively enforces a requirement that coffee be held in the pot at 185 degrees, plus or minus five degrees. He also testified that a burn hazard exists with any food substance served at 140 degrees or above, and that McDonalds coffee, at the temperature at which it was poured into styrofoam cups, was not fit for consumption because it would burn the mouth and throat. The quality assurance manager admitted that burns would occur, but testified that McDonalds had no intention of reducing the "holding temperature" of its coffee.

Plaintiffs' expert, a scholar in thermodynamics applied to human skin burns, testified that liquids, at 180 degrees, will cause a full thickness burn to human skin in two to seven seconds. Other testimony showed that as the temperature decreases toward 155 degrees, the extent of the burn relative to that temperature decreases exponentially. Thus, if Liebeck's spill had involved coffee at 155 degrees, the liquid would have cooled and given her time to avoid a serious burn.

McDonalds asserted that customers buy coffee on their way to work or home, intending to consume it there. However, the company's own research showed that customers intend to consume the coffee immediately while driving.

McDonalds also argued that consumers know coffee is hot and that its customers want it that way. The company admitted its customers were unaware that they could suffer thirddegree burns from the coffee and that a statement on the side of the cup was not a "warning" but a "reminder" since the location of the writing would not warn customers of the hazard.

The jury awarded Liebeck \$200,000 in compensatory damages. This amount was reduced to \$160,000 because the jury found Liebeck 20 percent at fault in the spill. The jury also awarded Liebeck \$2.7 million in punitive damages, which equals about two days of McDonalds' coffee sales.

Post-verdict investigation found that the temperature of coffee at the local Albuquerque McDonalds had dropped to 158 degrees fahrenheit.

The trial court subsequently reduced the punitive award to \$480,000 -- or three times compensatory damages -- even though the judge called McDonalds' conduct reckless, callous and willful.

No one will ever know the final ending to this case.

The parties eventually entered into a secret settlement which has never been revealed to the public, despite the fact that this was a public

case, litigated in public and subjected to extensive media reporting. Such secret settlements, after public trials, should not be condoned.

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